4. The leather Industry

282 There were eleven tanning or leather goods factories in
[433] Shensi and twelve in Kansu. Their total capacity was 180,000 pieces of hide per year, which amounted to only eighteen percent of the total production of hide in the Northwest.

Two factories were partly equipped with machinery. One was the Northwest Chemical Leather-making Factory in Sian, which had mechanical press, mechanical brush, sprayers, and its own generator. It used more than one thousand pieces of raw hide per month, and its output included shoes, belts, and other leather goods. The other was the Lanchow Leather-Making Factory, which had mechanized sander, sewing machines, pumps, and other equipment. Its products included leather and leather goods. The rest were small factories, using very simple tools.

5. The flour industry

256 There were eight modern flour mills in Shensi and two in
[433] Kansu, with a total capacity of 6,500,000 bags per year. On the basis that one bag of flour requires fifty-four catties of wheat, it was estimated that the total quantity of wheat used by the flour industry was 3,500,000 piculs per year, about 7.5 percent of the total production of wheat in the Northwest.

[433] The larger mills, such as the Hua-feng Flour Co. and Cheng-feng Flour Co. in Sian, and the Fo-hsin Flour Factory in Pao-chi, produce 3,000 to 5,000 bags per day. The rest were under one thousand.

6. Miscellaneous

388 (a) Soap-making. There were five small soap factories in
[433] Shensi and four in Kansu. The total annual output was some 35,000 cases, which satisfied only a small part of the demand for soap in the Northwest.

289 (b) Paper. Paper-manufacturing was one of the main handicrafts in the Northwest which may be found in many places, but details were not available.

339 (c) Cement. The first cement factory was established in
[491] Shensi in 1938, with a capital of CNC$200,000. It had nineteen kilns which turned out six or seven barrels a day. In 1939, another factory was built in Shensi, with a capital of CNC $2,000,000. Its capacity was around 18,000 barrels a year, but the quality of its products was very poor. Still another factory was under construction in Kansu, with a capital of 4,500,000. But up to the end of 1942, it had not yet begun production.

315 (d) Oil. Oil has been produced in north Shensi and Kansu for over a thousand years. But it was not until the early twentieth century that modern methods of extraction were used. Since then, five or six wells have been drilled in north Shensi. During the Sino-Japanese War, the Chinese government was very much

2: Teichman G-5 (1919) 1921 AF13 Northwest China AF13

through the cities of T'ungchou Fu and Weinan Hsien across the plains along the Yellow River, but we followed a slightly longer route further north across the loess uplands *via* Hoyang, Ch'engch'eng, P'uch'eng, Fup'ing, and Sanyuan, a week's journey by a good and mostly level trail. The season of the year was now late June and the rains had not yet broken, so we expected a scorching hot journey across these plains; but fortunately we struck the season of high winds which blow for a few days before the rains break, and had quite a pleasant journey until the last day or two, when we were overtaken by the opening downpours of the rainy season and had a hard struggle to get across the water-logged plain of the Wei River.

From Hanch'eng Hsien to Hoyang Hsien is a long march called 95 li. The road, now a good cart track, leaves Hanch'eng by the South Gate, and crossing a fine stone bridge runs down the valley through indigo fields for 20 li, where it debouches on to the Yellow River at the township of Chihch'uan Chen, a prosperous little city with an important likin station tapping the trade with Shansi. This place, like many other non-official townships we passed on the road to Hsian, is larger and wealthier than any district city we saw in Northern Shensi. At Chihch'uan the road leaves the Yellow River and climbs up on to the loess plateau some hundreds of feet above, across which it runs south-west and west, past the townships of Pailiang Chen (in Hoyang district) and T'ungchia Chuang, a centre of the vegetable oil industry, and many smaller villages, for the rest of the way to Hoyang. This plateau is just like all the other loess uplands, an undulating wheat prairie intersected by rifts and valleys; and the passage of two of these cañons hundreds of feet deep makes the march a long and arduous one.

Hoyang is a fairly large city, the centre of a first class district; but it is a poor-looking place inside, like most of these purely agricultural prairie towns, and is not to be compared with Hanch'eng, which probably does a good deal of trade with prosperous Shansi. It lies in a slight depression of the rolling loess uplands, now covered with short wheat stubble. Supplies of all kinds are abundant on this road, but game is scarce; though an occasional pheasant was to be seen in the bare fields.